Small Computer System Interface (SCSI) for IBM Personal System/2

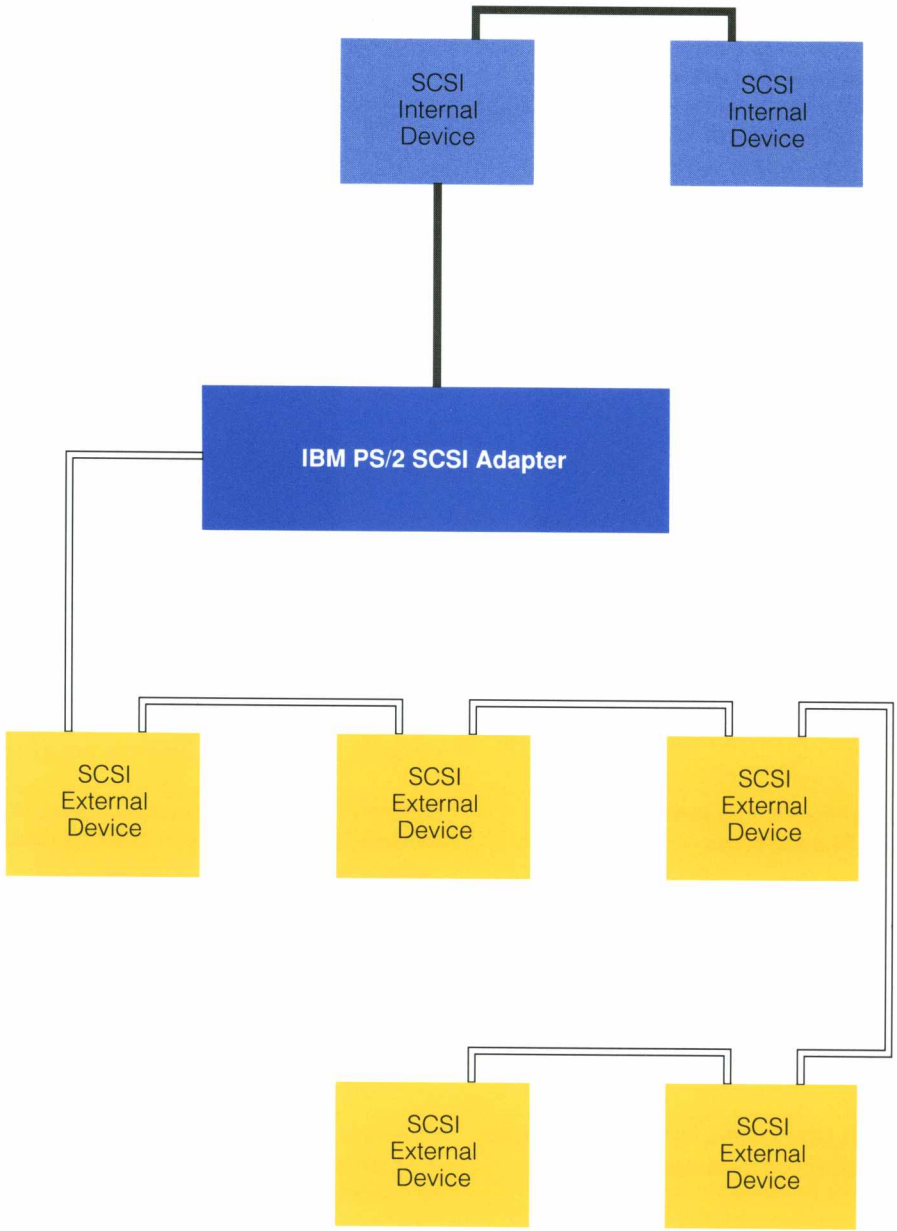
More expansion and growth for your Personal System/2

Put the industry-standard ANSI Small Computer System Interface (SCSI[1]) to work in your Personal System/2®—and work with more files and peripherals than ever before. With SCSI, you can support up to seven SCSI devices from a single Micro Channel™ expansion slot. And that means you'll have more free slots available for adding functions like communications, networking and advanced graphics.

Just as important, you can use the hardware-independent SCSI standard to take advantage of tomorrow's products and technologies when they become available—while protecting your present investment. And for today, you can enhance your PS/2® by adding high-performance fixed disks, CD-ROM drives, and more—all on a single PS/2 SCSI adapter.

Combine Micro Channel performance with SCSI flexibility

Because IBM's SCSI subsystems are designed for your Micro Channel system, they help your PS/2 do more work. For example, since IBM's SCSI adapters perform intelligent bus master functions, they can operate independently of your system processor. The result: improved system throughput and better I/O management for network file servers. It all means that data can be transferred faster, more efficiently and more reliably to meet the demands of many users or I/O-intensive applications.



IBM

Access more data faster with SCSI fixed disks

With SCSI adapters, floorstanding PS/2 systems can support up to four internal fixed disks for impressive file server capacity—over 1 gigabyte (Gb) on some models. And, for equally impressive performance, they can accept any combination of IBM 60Mb, 120Mb and 320Mb SCSI internal fixed disk drives with access times as fast as 12.5ms.

Even better, the adapters permit a PS/2 to support both SCSI and non-SCSI drives—including disks with ESDI or ST506 interfaces. So you can use them to protect the investment you have made in fixed disk storage while taking advantage of today's high-performance drives.

Add powerful resources economically with CD-ROMs

Imagine a dictionary, thesaurus, spelling-checker and quotation library—all online for ready reference by your secretaries or writers. Picture entire volumes of clip art, illustrations and graphics on hand to liven up your publications and presentations.

IBM SCSI CD-ROM drives can put these resources online. Up to seven CD-ROM drives can attach to a single SCSI adapter, so you can make multiple libraries and references available for your users. And the stereo output jack of the IBM CD-ROM drives allows you to add impressive sound to multimedia presentations.

Why is SCSI important to you?

Developed in the early 1980s, the Small Computer System Interface (SCSI) is a widely used industry standard that supports I/O devices through a common interface and common protocol. The importance of SCSI stems from the fact that it provides an open architecture for attaching and controlling peripheral equipment—up to seven devices from a single adapter. So SCSI lets you take advantage of products offered by many different manufacturers.

SCSI means investment protection, too, since it gives you an efficient, industry-standard growth path for expanding your system as new technologies become available.

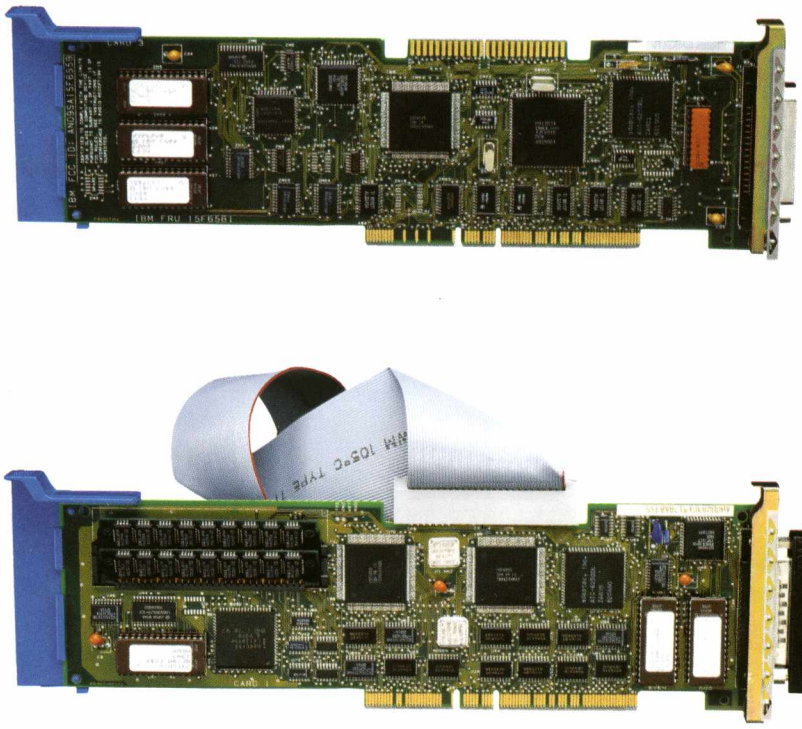
SCSI can bring you the benefits of high-performance fixed disks, helpful CD-ROM libraries, and other standard SCSI devices—all from a single Micro Channel slot.

Get powerful flexibility and features from two SCSI adapters

Whichever IBM PS/2 SCSI Adapter you choose, you get expandability combined with high data transfer rates and Micro Channel support. Both adapters let you attach up to seven SCSI-compatible devices—and up to 28 devices can be supported on a single PS/2. And these adapters both offer bus mastering capabilities to offload I/O tasks from your system processor for consistent high throughput.

The IBM PS/2 Micro Channel SCSI Adapter offers you a cost-effective SCSI solution for expanding your PS/2s. It fits in either a 16- or 32-bit Micro Channel slot and provides a data transfer rate of up to 8.3Mb per second via its 16-bit data path.

For disk-intensive environments where overall performance is critical—like multi-user transaction processing or high-capacity network servers—the PS/2 Micro Channel SCSI Adapter with Cache offers additional performance advantages. Its 32-bit data path gives you a data transfer rate of up to 16.7Mb per second—twice that of the 16-bit adapter. And it can use its built-in 512Kb cache to free more of your system memory for running applications.



Both IBM PS/2 SCSI Adapters combine powerful Micro Channel bus mastering capabilities with support for up to seven SCSI devices. So you get fast SCSI data transfer rates of up to 16.7Mb per second—and balanced throughput as well.

IBM PS/2 Micro Channel SCSI subsystem

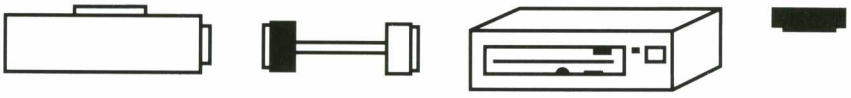
Feature	Benefit
ANSI SCSI-1 industry standard	• Enhances system expansion by supporting up to seven internal and external SCSI devices on one adapter—up to 28 SCSI devices on some PS/2s • Enables the connection of SCSI devices from other manufacturers • Protects your PS/2 investment by providing a device-independent architecture
Intelligent bus master SCSI adapters	• Offload the system processor, allowing it to do more work • Provide balanced system performance and high throughput for multitasking and multi-user environments • Work with Micro Channel architecture to deliver more efficient and reliable data transfer
General-purpose SCSI interface	• Supports fixed disks and other SCSI devices on a single adapter • Keeps PS/2 expansion slots free for other features
Built-in fixed disk BIOS	• Lets you use both SCSI and non-SCSI fixed disk drives on the same PS/2 • Provides compatibility for DOS and Operating System/2™ environments
Fast IBM 60Mb, 120Mb and 320Mb SCSI fixed disk options	• Increase the amount of high-speed storage available for floorstanding PS/2 models • Let you add fixed disk drives as you need them—up to four internal drives on some models • Allow you to tailor your storage capacity by using a mix of disk sizes
IBM CD-ROM options	• Provide low-cost alternatives for storing large amounts of read-only data • Support (HIGH SIERRA) ISO 9660 industry-standard compact disk format

IBM SCSI Cables and Accessories

PS/2 Card to Option Cable	A 60-pin to 50-pin connector cable required for attaching the first SCSI external device in the daisy chain; includes a 50-pin Option Interface Terminator required for the last external device in the chain. (Part number 6451041)
PS/2 Option to Option Cable	A 50-pin to 50-pin connector cable for attaching one SCSI external device to another. (Part number 6451042)
PS/2 SCSI Fixed Disk Kit A	Required to install SCSI fixed disk drives in the front DASD bay of the IBM Models 60, 65 SX and 80 386. (Part number 6451053)
PS/2 CD-ROM Kit A	Required to install the internal CD-ROM drive in the IBM Models 60, 65 SX and 80 386. (Part number 6450847)
PS/2 Micro Channel SCSI Adapter External Terminator	Required to terminate the Micro Channel SCSI Adapter with Cache when no external SCSI devices are attached. (Part number 6451039)

SCSI cabling for external attachment

To install a single external device

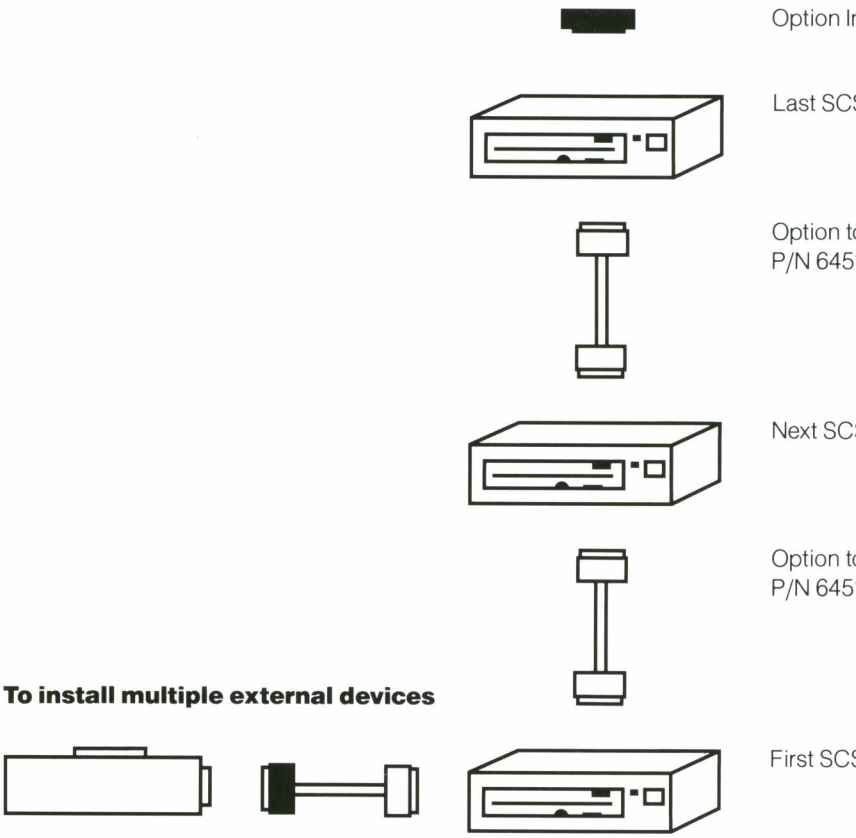


SCSI adapter

Card to Option Cable P/N 6451041

Option Interface Terminator*

To install multiple external devices



Option Interface Terminator*

Last SCSI device

Option to Option Cable P/N 6451042

Next SCSI device

Option to Option Cable P/N 6451042

First SCSI device

SCSI adapter

Card to Option Cable P/N 6451041

*Included with Card to Option Cable

IBM PS/2 Micro Channel SCSI product family at a glance

SCSI Adapters	Micro Channel SCSI Adapter	Micro Channel SCSI Adapter with Cache
Part number	6451005	6451018
Configuration	Uses one 16- or 32-bit Micro Channel expansion slot; up to four SCSI adapters may be installed on some PS/2s	
Micro Channel Data path Transfer rate	 16-bit 8.3Mb/sec.	 32-bit 16.7Mb/sec.
SCSI channel Data path Transfer rate	 8-bit 5Mb/sec.	 8-bit 5Mb/sec.
Data cache	None	512Kb
SCSI BIOS	Provides fixed disk interface for DOS and OS/2® environments; allows operation of both SCSI and non-SCSI fixed disks on the same PS/2; includes Power-on Self Test (POST) and a generic, hardware-independent interface for other SCSI devices	
Device support	Up to seven SCSI-compatible physical devices via IBM SCSI internal or external adapter connectors; up to eight logical devices can be defined for each physical device, to a maximum of 15 logical devices per adapter	
SCSI cabling	Serial "daisy-chain" cabling, with a total cable length not exceeding 6 meters; devices or adapters at the ends of the chain must be terminated	
Terminators	On-card terminator built in	Card edge terminator included; separate external terminator (Part number 6451039)

IBM SCSI Fixed Disk options	60Mb SCSI Fixed Disk	120Mb SCSI Fixed Disk	320Mb SCSI Fixed Disk
Part number	6451049	6451050	6451055
Average access time	23ms	23ms	12.5ms
Supported systems	Model 60, Model 80 386 (-041, -071, -111 and -311); require IBM SCSI adapter; maximum of two SCSI fixed disks Model 65 SX, Model 80 386 (-121, -321, -A21 and -A31); SCSI adapter is standard equipment; maximum of four fixed disks		

IBM SCSI CD-ROM	PS/2 CD-ROM Drive (internal)	PS/2 External CD-ROM Drive
Part number	6450845	3510001
Storage capacity	Approximately 600Mb; (HIGH SIERRA) ISO 9660 CD-ROM media format	
Supported systems (via IBM SCSI Micro Channel Adapters)	All PS/2 Models 60, 65 SX and 80 386	All PS/2 Micro Channel models

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[1]*ANSI X.3-131-1986*

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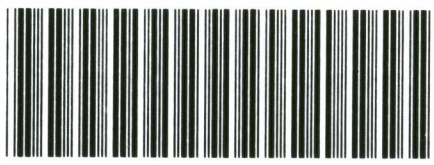

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